| April 7 | Tuesday | How to tell the Good Guys from the Bad Guys: An Overview of Discriminant Analysis |
| April 7 | Tuesday | Research and Evaluation for the 1987 Census of Agriculture |
| April 8 | Wednesday | Statistical Graphics and Information Design |
| **April 14** | **Tuesday** | **New Methods in the Age of Progress in the Analysis of Cross-Classified Data: Correspondence Analysis Models, Log-Bilinear Models, and Other Models for Discrete Data** |
| April 23 | Thursday | Topics in Nonresponse Estimation |
| April 28 | Tuesday | Partial Likelihood Analysis of Logistic-Autoregressive Time Series Models |
| April 28 | Tuesday | Redesign of the National Crime Survey |

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## Telephone Survey Research at Statistics Canada

The telephone survey research at Statistics Canada is being undertaken with the objective of improving the cost efficiency of the Canadian Labour Force Survey (LFS) and other household surveys. The LFS is a rotating panel survey and the households selected for the survey remain in the sample for six consecutive months. The current data collection methodology is a personal visit in the first month in which households are in the sample and telephone interviewing during later months.

The LFS was chosen for testing new telephone methods due to its role as a central vehicle, in terms of sample frame and design, data collection and processing infrastructure, for conduct of household surveys within Statistics Canada. Developmental work to date has focused on testing both the conduct of first month interviews by telephone in the context of the current area sample design, and on converting a portion of the LFS sample to a telephone frame under a dual frame methodology.

A procedure for replacing personal first month interviews with telephone interviews is currently being examined in a controlled experiment embedded into the ongoing Labour Force Survey. In the provinces of Quebec and Ontario, lists containing addresses and telephone numbers of published residential telephone subscribers are purchased quarterly. These lists are matched with the addresses of dwellings selected for the sample. For roughly 7% of the new dwellings each month, telephone numbers are supplied to the local interviewers, who for such cases attempt the first interview by telephone. A 60% success rate has been

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achieved with exact matching of addresses, which it is hoped can be improved upon by use of more advanced record linkage methods. For the test sample, from 70 - 80% of first month interviews have been conducted by telephone. Nonresponse rates for the test and control samples are comparable. Comparisons of average household size and labour force characteristics are still underway.

A test was carried out during 1986 to test the feasibility of conducting the LFS as a telephone survey from regional office sites for households with telephones. Two sampling approaches were investigated. In the list sampling approach, a systematic sample of telephone numbers was selected from the quarterly lists referred to above. Sample cases were sent a prior letter about the LFS. Under this approach, unpublished numbers and households with business numbers were covered by an RDD sampling. Also research into the conduct of the LFS by Computer Assisted Telephone Interviewing has begun recently, as part of a joint research effort with the U.S. Bureau of the Census.

The RDD approach involved a PPS selection of hundreds banks based on purchased counts of residential numbers (published and non-published). Screening to identify residential numbers and to offer an introductory letter was done in the week prior to conducting the LFS interview.

Results on data quality from the test have been very encouraging; for example, the response rates were 93% for the list approach and 91% for the RDD approach as compared with the 95% for the regular LFS. However, more research is required before implementing such a procedure. One major problem in the context of panel surveys is the rapid deterioration of the telephone frame over time; for example, attrition due to numbers being disconnected. Further testing is planned in the coming year that will address this and other issues.

Analysis of costs and variance from the test is currently underway, and will be used in considering what would constitute a suitable allocation of sample to telephone and area frames under a dual frame methodology.

(For further information contact Douglas Drew, 4-C2, Jean Talon Building, Statistics Canada, Ottawa, Ontario, Canada, K1A 0T6. Telephone (613) 991-6930.)

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## Program Abstracts

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| TOPIC: | **How to Tell the Good Guys from the Bad Guys: An Overview of Discriminant Analysis** |
| SPEAKER: | Irwin Greenberg, Department of Operations Research & Applied Statistics, George Mason University |
| CHAIR: | Don Gantz, George Mason University |
| DISCUSSANT: | John Hiniker, Internal Revenue Service |
| DATE AND TIME: | Tuesday, April 7, 1987; 12:30 to 2:00 p.m. |
| LOCATION: | IRS Auditorium (7th Floor), 1111 Constitution Avenue, N.W. (Across from Federal Triangle Metro Station) |
| ABSTRACT: | "Discriminant analysis" has come to refer to the collection of techniques used to examine a sample, consisting of measurements on individuals drawn from a number of different sub-populations, in order to determine a mathematical relationship that one can use on a new individual to deduce the sub-population from which it came. Statistical and non-statistical approaches to the problem will be considered. Examples drawn from a number of fields in both the private and public sectors will be discussed. |

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# Program Abstracts (continued)

TOPIC: | **Research and Evaluation for the 1987 Census of Agriculture**
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TOPIC:     **Research and Evaluation for the 1987 Census of Agriculture**

SPEAKERS:     Charles Pautler, Jr., Cynthia Clark, Ruth Ann Killion
Bureau of the Census

CHAIR:     Ron Bosecker, USDA

DISCUSSANT:     Open discussion

DATE AND TIME:     Tuesday, April 7, 1987; 12:30 to 2:00 p.m.

LOCATION:     Room 4302 South Agriculture Building, 12th and Independence Avenue (Smithsonian Subway Stop)

ABSTRACT:     The Agriculture Division of the Bureau of the Census is charged with the responsibility for conducting the quinquennial census of agriculture. The mail out/mail back census is the only source of detailed, county-level data for the nation's 2.2 million farms. Plans and initiatives for the 1987 Census of Agriculture will be discussed along with results of tests of mail followup procedures, questionnaire format and type including an optically scanned form, and screening for farm status. Evaluation and research plans for the census will also be presented.

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TOPIC:     **Statistical Graphics and Information Design**

SPEAKER:     Edward Tufte, Yale University

DATE AND TIME:     Wednesday, April 8, 1987; 12:00 to 1:30 p.m.

LOCATION:     Room 2736, GAO Building, 441 G Street, N.W., Washington, D.C. (Judiciary Square Metro) (Please call 523-1760 if you plan to attend in order to assure building entrance. Note time of talk.)

ABSTRACT:     No formal abstract was provided. We quote from Daniel Zelterman's review in JASA of Dr. Tufte's book.

> A recent full-page newspaper advertisement promoting a brokerage firm featured as part of its sales pitch an important-looking graph. It showed a bold, jagged line that ended in a large question mark, giving the impression of a vital upward trend in the commodities market that only the brokerage firm could predict. We will never know what the trend was, though, as there was no legend, the vertical axis had numbered divisions but no units, and the horizontal axis was marked but completely unlabeled. Obviously the American public is so influenced by graphs that even one that conveys no information at all is psychologically powerful enough to sell. Surely it is time for statisticians to review the nature of graphics.
>
> *The Visual Display of Quantitative Information* is the most important contribution, so far, to the study of this elementary form of data analysis--the graph.

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# Program Abstracts (continued)

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| **TOPIC:** | **Topics in Nonresponse Estimation** |
| **SPEAKER:** | Roderick Little, UCLA |
| **DISCUSSANT:** | William Winkler, EIA |
| **DATE AND TIME:** | Thursday, April 23, 1987; 10:00 to 11:30 a.m. |
| **LOCATION:** | Room 2736, GAO Building, 441 G Street, N.W., Washington, D.C.<br>(Please call 523-1760 if you plan to attend in order to assure building entrance.)<br>(Judiciary Square Metro) |
| **SPONSOR:** | Methodology Section |
| **ABSTRACT:** | Two approaches to nonresponse imputation adjustment in large surveys are considered: imputation, and direct analysis of the incomplete data. Properties of a good imputation scheme are discussed. Payoffs of imputation relative to naive analysis of the incomplete data are shown to be highly dependent on the parameter of interest. Recent literature on efficient model-based methods for analyzing the incomplete data are outlined. |

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| **TOPIC:** | **Partial Likelihood Analysis of Logistic-Autoregressive Time Series Models** |
| **SPEAKER:** | Eric Slud, University of Maryland |
| **CHAIR:** | Jai Choi, National Center for Health Statistics |
| **DISCUSSANT:** | David Zucker, NHLBI, NIH |
| **DATE AND TIME:** | Tuesday, April 28, 1987; 1:30 to 3:00 p.m. |
| **LOCATION:** | Room 1-39, NCHS, 3700 East West Highway, Hyattsville, Maryland |
| **SPONSOR:** | Office of Research and Methodology, NCHS and WSS |
| **ABSTRACT:** | Review of the study of the use and publication of data from DHCS Surveys, including analysis of the contents of user data requests and summary of the sources, and analysis of the extent to which DHCS reports address major health care utilization issues. |

The estimation of unknown coefficients in logistic regression models will be discussed in the general context of stochastic process regressors from the point of view of partial likelihood. First, the rigorous results on consistency and asymptotic normality of estimators will be summarized. Next, the logistic regression model with stochastic regressors will be specialized to two important types of data structure: longitudinal response data with covariates, and time series level-crossing data with time series covariates. Finally, some results on the relative efficiency of partial likelihood-based estimates with respect to MLE's will be presented.

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# Program Abstracts (continued)

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| TOPIC: | **Redesign of the National Crime Survey** |
| SPEAKER: | Bruce Taylor, Bureau of Justice Statistics |
| CHAIR: | Charles Kinderman, Bureau of Justice Statistics |
| DISCUSSANT: | James Lynch, American University School of Justice |
| DATE AND TIME: | Tuesday, April 28, 1987; 12:30 to 2:00 p.m. |
| LOCATION: | Room 2736, GAO Building, 441 G Street, N.W., Washington, D.C. (Judiciary Square Metro)  (Please call 523-1760 if you plan to attend in order to assure building entrance.  Note time of talk.) |
| SPONSOR: | Social and Demographic Statistics |
| ABSTRACT: | The National Crime Survey was implemented in 1972 to provide data on the level of crime victimization in the United States and to collect data on the characteristics of crime incidents and victims.  After several years of experience with the survey and partly in response to an evaluation by the National Academy of Sciences, a multi-year effort to redesign the NCS was begun in 1979.  This work should result in expanded information on the characteristics and consequences of crime victimization, a more effective strategy for obtaining reports of crime incidents from respondents, adoption of computer assisted telephone interviewing technology, expanded use of supplements, and an improved ability to measure long-term aspects of victimization, including multiple victimization and extended contacts with the criminal justice system.  The redesign is being carried out in two phases, the first being implemented in July 1986, and the second scheduled for 1988. |

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# Other Announcements

## Washington Academy of Sciences Seminar

On Thursday, April 16, Frank Yekovich, Chairman of the W.A.S. Awards Committee, will present science awards for achievement in the behavioral, biological, physical, mathematical, and computer sciences, engineering, and the teaching of science in secondary schools and universities.  The talk will be held at the Mary Grayden Center, American University, at 8:30 p.m.  Preceding Dr. Yekovich's presentation, there is a social hour at 6:45 and a dinner at 7:30.  There is a charge for the social hour and dinner.  Reservations must be made one week in advance by calling 320-3621.  There is no fee for attendance of only the lecture.

## Conference on Integrating Data for Decision Making

The conference will focus on: data development, integration and use; data sources; applications; and decision making.  For additional program information, contact Lorraine Amico at (202) 624-5346.  For registration and hotel information, contact Jan Dunlavey at (202) 624-5347.

# Other Announcements (continued)

## ASA Building Purchased

Eva Jacobs, District 1 Representative to the ASA Board of Directors, informs us that the ASA agreed on February 11 to purchase a building at 1429 Duke Street, Alexandria, Virginia. The purchase was approved by the 1986 and 1987 Executive Committees of the ASA Board, who had been voted this authority by the full Board. Additional details after the April Board meeting.

## Open Board Meeting

The WSS Constitution specifies that at least one meeting of the Board of Directors shall be announced to the membership as an "open meeting" to provide a forum for comments and suggestions from members-at-large. This year's meeting will be held Tuesday, May 26, at 12:30 p.m. in Room 3000 at 400 Maryland Avenue, S.W. More details in next month's newsletter.

## Survey Methodology Journal

Not all our readers may be familiar with this journal published by Statistics Canada. It publishes articles dealing with various aspects of statistical development relevant to a statistical agency, such as:

- design issues in the context of practical constraints
- use of different data sources and collection techniques
- total survey error
- survey evaluation
- research in survey methodology
- time series analysis
- seasonal adjustment
- demographic studies
- data integration
- estimation and data analysis methods
- general survey systems development

Emphasis is placed on the development and evaluation of specific methodologies as applied to data collection or the data themselves.

For submission of papers or for further information write to: Editor, Survey Methodology, Methodology Branch, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6. All papers will be refereed.